

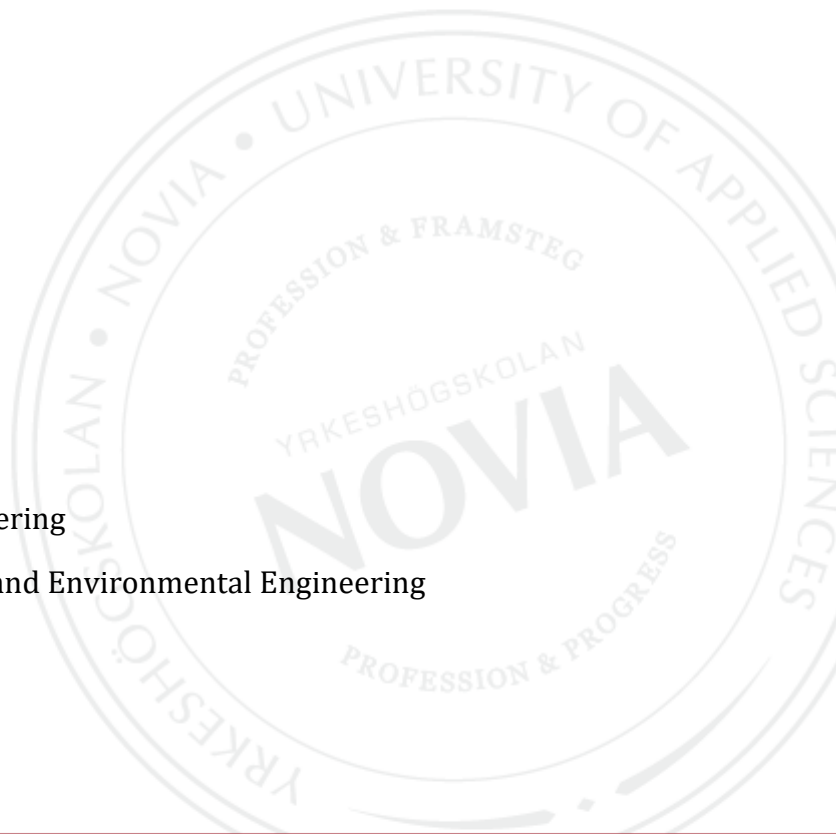
Updating Management Systems of SME's, Regarding Legislative and Normative Changes

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BACHELOR'S THESIS

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Abstract

The goal of this thesis is to reflect on the management system in use by Flexipack Oy, a company of about 30 employees that produces high-tech barrier films for the food industry. The management system in use is critically assessed, to identify issues and problems. Management systems at small or medium sized enterprises can be updated, through the use of interviews and qualitative content analysis. Key elements of international standards are recognized, upon which the interviews at Flexipack were based. The personnel at Flexipack was interviewed regarding the management system in place. A total of twelve interviews were conducted. The questions asked were open structured to encourage discussions. The results of this thesis shows that the management system is functional, however some weaknesses and issues where observed. Through thorough analysis of the interviews, suggestions for continuous improvement were made. On Flexipacks request, their list of legislation was updated.

Language: English	Key words: Updating, Management system, ISO standard, SME, Qualitative, Interview
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EXAMENSARBETE

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Abstrakt

Syftet med detta ingenjörsarbete är att reflektera över ledningssystemet som används av Flexipack Ab, ett företag med cirka 30 arbetstagare, som producerar högteknologiska barriärfilmer för livsmedelsindustrin. Ledningssystemet som används utvärderas kritiskt för att identifiera fel eller problem. Ledningssystem vid små och medelstora företag kan uppdateras genom intervjuer och kvalitativ innehållsanalys. Intervjuerna vid Flexipack baserar sig på huvudprinciper i internationella standarder. Personalen vid Flexipack intervjuades kring det använda ledningssystemet. Totalt genomfördes tolv intervjuer. Frågorna som ställdes var öppna för att uppmuntra till diskussion. Resultaten visar att ledningssystemet är funktionellt, dock upptäcktes brister. Genom noggrann analys av intervjuerna gjordes förslag till förbättring. På begäran av Flexipack uppdaterades också deras lista över lagstiftning.

Språk: Engelska

Nyckelord: uppdatering, ledningssystem, ISO standard, små och medelstora företag, kvalitativ, intervju

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Tiivistelmä

Tämän insinöörityön tarkoituksena on kuvailla käytössä olevaa johtamisjärjestelmää Flexipack Oy:llä, yritys jolla on noin 30 työntekijää, joka tuottaa korkeateknologisia kalvoja elintarviketeollisuudelle. Johtamisjärjestelmää arvioidaan kriittisesti, virheiden ja ongelmien löytämiseksi. Johtamisjärjestelmä pienessä tai keskikokoisessa yrityksessä voidaan päivittää haastattelujen ja kvalitatiivisten analyysien avulla. Haastattelut rakentuvat Kansainvälisten standardien peruseriaatteiden pohjalle. Flexipackin henkilökuntaa haastateltiin käyttämästään johtamisjärjestelmästä. Yhteensä tehtiin kaksitoista haastattelua. Kysymykset ovat laadittu avoimesti tarkoituksena rohkaisemaan keskusteluun. Tulokset näyttävät että johtamisjärjestelmä on toimiva mutta kehittämiskohteita löydettiin. Haastattelujen tarkan analyysin jälkeen, esiteltiin parannussuosituksia. Flexipackin pyynnöstä myös heidän käyttämänsä listaa lainsäädännöstä päivitettiin.

Kieli: Englanti

Avainsanat: päivitys, johtamisjärjestelmä, ISO standardi, pienet ja keskikokoiset yritykset, laadullinen, haastattelu

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Definitions

BRC	(British Retail Consortium)
CEO	(Chief Executive Officer)
EMS	(Environmental Management System)
ERP	(Enterprise Resource Planning)
Fin.	(Language is Finnish)
ISO	(International Standards Organization)
PDCA	(Plan-Do-Check-Act)
QMS	(Quality Management System)
SMEs	(Small and Medium sized Enterprises)
Swe.	(Language is Swedish)

1. Introduction

The process of updating a management system can be a challenging task, due to the daunting thoughts of all the different aspects to incorporate when updating a management system [1]. There are several reasons for updating a management system, such as optimization and improvement of the management. A well-implemented management system usually results in a more efficient and streamlined process. The proper use of management standards usually results in less material waste, more efficient workflow and economical savings [1]. As an example: Today, quality management is integrated in production and often involve on-line measurements, this enables the detection of errors that can be corrected before faulty products are created, and thereby waste material is reduced [2].

Continuous improvement is a requirement for all organizations certified with ISO (International Standards Organization) standards, which are the most common forms of management standards implemented internationally. Organizations can see a benefit both from a management perspective and a practical level, the implementation of management standards helps employees to get a clear picture of what needs to be done. Standards also provide a way for solving issues, and improve communication between management and personnel. [1]

This thesis reflects upon the management systems in use by Flexipack Oy, a company producing high-tech plastic barrier films for the food industry. Through the use of interviews and qualitative analysis suggestions are made to how Flexipack can further develop their management system. The work also describes how the list of legislation was updated.

2. Background

The description of the goals of this thesis is presented by research questions. The chapter also describes the timeframe and the schedule of the work done. This thesis was contracted by Flexipack Oy, the task was to update the list of legislation in use by Flexipack. The task however developed into, the updating of Flexipacks management system.

2.1 Flexipack

Flexipack is a small family owned company founded 1992 in Vaasa, Ostrobothnia. In the year 2014 the company had 29 employees. Flexipack manufactures plastic films foremost to the food packaging industry. Their main products are high-tech barrier films. Flexipack strives to be the most flexible supplier of barrier films in all of Scandinavia. Through their experience, research and know-how Flexipack is able to offer their customers individual service and packaging solutions. Flexipack only supplies the barrier films, any printing is done by the customer. A large portion of their products roughly 50% are exported, and the amount is continuously increasing. [3]

Flexipack sees quality not only as the physical product, but the whole process including customer service and satisfaction. Competence development and special training is offered to the personnel at Flexipack continuously [3].

2.2 Goals and research questions

The goal of this thesis is to reflect upon the management system in use by Flexipack, the management manual (Swe. Ledningsmanual [3]) is critically assessed in accordance with key elements in international standards. The view of the employees is presented through a series of questions and interviews. Based on this case study, suggestions for further improvements are given. Suggestions are also made to further develop the management system at Flexipack. The interviews enable Flexipack to recognize issues and weaknesses with their management system, allowing for an update.

Research questions:

1. Describe the management system at Flexipack
2. Identify issues/weaknesses
3. Identifying potential for improvement

Flexipack furthermore needs an update of the list of legislation as well as a description of the process, for how updating the legislation can be done systematically and efficiently. This was done upon model documents that were provided by Flexipack.

2.3 Timeframe

The initial contact between Flexipack and Novia was taken in September 2015, however work did not start until December 2015 with literature studies and writing of the thesis started in late February 2016.

A time schedule was made in November, literature studies and planning were set for December and January. Schedule aiming for the completion of the thesis within April. The schedule was followed and the interviews were arranged in March and the completion of the thesis was achieved in mid-April.

2.4 Previous studies

In order to achieve a broader understanding of how management systems and standards work, some previous works regarding qualitative studies, relating to management standards or regulatory incorporation, were listed. Through the studying of the literature, a good base was established for the background knowledge.

- S. B. Merriam [4], describes how qualitative research is done on a general level. The work introduces the structure and content of qualitative research, and functions as a guide.
- K. B. DeMarrais and S. D. Lapan [5], the book is a general introduction to academic research.
- C. A. Cianfrani [1], describes which the key elements of ISO 9001:2008 are, and how they are successfully implemented. The tools and processes required to achieve certification are described, and the work includes a thorough walkthrough of the standard.
- T. Stålhane [6], the paper describes the creation of a processes that fulfill ISO 9001 requirements. The use of questions relating to ISO standards, gave a starting point to create the questions used in the study at Flexipack.
- E. Fagotto [7], describes the importance and reasons for implementing private food safety standards.
- C. Griffith [8], discusses the globalization of food safety standards such as BRC, and legislation within the industry.
- R. Kill [9], describes how organizations can be successful when it comes to BRC audits, however the principles are applicable to other audits than BRC.

2.5 Legislation background

In this subchapter, the basis for updating the legislation list is formed through general knowledge and information about legislation. It is every citizen's responsibility to follow the local, national and international laws and regulations, and it is required that each individual and or organization of any size are aware of the laws and regulations [10]. However there is no given way how this knowledge

is achieved in a systematic way, where the laws and regulations concerning that individual or organization are specifically pointed out. This remains a tedious task. Through proper management and systematic updates, this task can be simplified [11].

Laws are publicly available documents published or handled by different governmental ministries and courts, and are subjected to continuous change. It is important for organizations to be able to refer to laws at different point in time [11]. Keeping updated with legislation, is a requirement of the (ISO) [12]. For certified organizations it is important to have an efficient and well managed way of following any changes in legislation. The ISO standards can be used as tool to achieve efficient management systems.

For SME's (Small and Medium sized Enterprises) such as Flexipack there is no given method for how to stay updated on current legislation, this is decided by the companies themselves. Staying updated is especially important for companies that work within the food industry or food packaging industry, since the regulatory framework is being continuously updated and the tolerances lowered, nationally as well as internationally. The European legislation is affecting Finnish industries as well. This is done to secure the health and safety of the inhabitants, through enforcements of standards such as the British Retail Consortium (BRC) and (ISO) as examples [7].

Finnish Legislation

All acts and regulations passed by the parliament are processed and prepared by different ministries, commonly by the Ministry of Justice. Passed acts and regulations can be found in Finlex, the official online data bank for the Finnish legislation. [13] The acts and regulations found in English from Finlex, are not the official version. It is always the Finnish original and the Swedish translations that are official.

European Legislation

European Union legislation can be found in EUR-Lex [14], the collective database for all the European Union acts and decrees. EU-law affects laws within the EU

member-states, the member states implement the EU-laws in different ways, refer to national laws for exact implementation. [14]

3. Management systems and standards

In this chapter, the most essential standards in use by or relating to Flexipack are broken down into key elements that are generally accepted as important aspects. The breakdown is based upon studies like [1, 6, 15, 16] that thoroughly identifies the critical steps needed to achieve good management in accordance to different international standards. In Chapter. 4.2 questions are formulated based on the knowledge gained from the breakdown of the standards in this chapter.

3.1 Quality management with ISO 9001:2008

This subchapter describes the requirements and highlights the most important aspects of good quality management through a breakdown of the key principles of quality management systems (QMS) in accordance with the ISO 9001:2008. According to [15] implementation of ISO 9000 series provides a good base for companies to work upon, however sometimes customers assume that an ISO certified organization are up to date with regulatory requirements. This is up to the operator of the QMS to ensure that diligence is taken to ensure continuous follow-up on requirements of standards and legislation.

Customer focus

Today the success of an organization's success depends largely on understanding customer expectations and meeting these requirements. In any organization customers are central stakeholders, organizations should focus their energy on satisfying the needs of their customers [1].

Leadership and management

It is the responsibility of the leader to manage and improve the working environment in order to make the goals of the company aligned to the way of

working. The standardization of tasks and processes should be adjusted to involve all employees and to have an understanding about the organizations goals [1]. The involvement of management has in previous studies shown to be important. Proper implementation of an ISO certified management system requires time and money, which are under the control of the management [6].

Employee involvement

The involvement of employees at different stages in the production from factory floor to management, is important. This allows the management to utilize ideas, suggestions and resources presented for further improvement [1]. Involving the people who will directly be affected by the changes is essential to success with the implementation of new management systems. It ultimately narrows down to the fact that the employee is the one who will enforce the changes. If the suggested alterations about how things are done are not accepted by the employee, the initiative to change is useless [6].

Process overview

The overview of how an organization functions is an important aspect that employers usually do not require from personnel. This means general understanding of how the organization works and why certain things are done. A general overview of how the organization works can be achieved for example through the creation of flowcharts. The purpose of process overview is to answer the question why something is done. Only when employees achieve an overall understanding about the processes at the organization, they can work towards improving the system [1, 16]. In ISO 9001:2008 recognition and management of important work-tasks and processes is required, see ISO 9001:2008 for details [12]

Continuous improvement

The reasoning behind implementation of ISO 9000 quality standards is mainly, the establishment of functional and cost effective QMS that will benefit the organization in the long run [1, 15]. Many organizations rush to implement ISO standards due to customer requirements or fears of losing customers to certified competition. In these cases there is a risk of the management to hastily adjust their

management system resulting in overcomplicated management systems, only to comply with ISO requirements. However the main goal of ISO 9000 series is to function as a tool for cost effective continual improvement [15]. Continuous improvement is one of the key principles of the ISO standards [1] and can be achieved through careful documentation and collection of data at each step of the Plan Do Check Act (PDCA) cycle [12]. This method can be applied to any process, therefore it is important to standardize this aspect [1].

The use of analytical tools to assess and analyze data gathered through proper utilization of PDCA, and basing decisions on the gained knowledge. The identification of issues and faults can be properly addressed by making decisions based upon facts. Using PDCA has proven to improve the overall performance of companies. [1].

3.2 Environmental management with 14001:2004

Organizations in need of an environmental management system (EMS) usually already have a QMS. Therefore, ISO 14001 is often integrated with ISO 9001, since many required documents are the same and can be merged. This is made easy due to intentional planning by the International Standards Organization. The ease of implementing several standards at the same time encourages organizations to manage environmental issues together with quality management. As an example both standards require that the organization has a policy, if these standards are merged there is only need for creation of one policy.

The ISO 14001:2004 is largely based on the quality management standard ISO 9001:2000. The framework of the standards is the same, the environmental standard adds requirements concerning environmental management. [17]

3.3 Food safety management with BRC and ISO 22000

Successful implementation of food safety standards is not the certification or passing an audit, rather the capacity to maintain the standards between audits [9]. Within the food industry the stakeholders perhaps take a larger role than other industries, because food and food packaging industry heavily relies on reputation

of the brand. The reason being, concerns for health [8]. ISO 22000 is integrated in BRC, the requirements are stricter in BRC, which means that conforming to BRC requirements usually also fulfills the ISO 22000 standard. [9, 18]

4. Methods

A qualitative study was made, striving for improvement of the current QMS and EMS in use by Flexipack. The data was collected through a series of interviews. Spoken data is difficult to measure and is a type of qualitative data [4]. This chapter describes the creation of interview questions that answer the research questions from Chapter 2.2. The creation of questions required extensive literature studies on legislation concerning Flexipacks day to day operations and the standards ISO 9001, ISO 14001. The quotations in the results have been translated from Finnish and Swedish into English.

4.1 Qualitative Interviews

According to [5] the process of an interview is when an active discussion between the researcher and the participant is achieved. The decision to conduct person-to-person interviews was made based on the fact, that interviews collect data that can otherwise not be observed [4]. Other viable alternatives such as group interviews or conducting a survey was also considered, however in such a small organization person-to-person interviews was decided to be the best choice. The decision was made based on that interviewing the employees in groups could jeopardize the confidentiality of the employees in the results.

The participants were informed about the upcoming interviews, through internal communications at Flexipack, the participants were called for interviews one at a time, there was no specific selection of who would be interviewed. The interview questions relate to the work being done, and the participants opinions of the management systems in place at Flexipack, and the functionality of these systems. The participants were given the opportunity to make suggestions for further improvement. The intention was to interview as many employees as possible and a total of twelve participants were interviewed, this was the number of employees

available at the given time. These participants were from varying groups in the company representing management, administration and machine operators. The only demographic information collected was their years of employment at Flexipack. This was asked to evaluate if experience had an effect on the opinion of the management systems in use, today versus before.

The questions were a mixture of semi structured and follow up questions [4], this was intentional to allow for open ended questions, which should result in a discussion, rather than a survey type questionnaire. The data collected was obtained through asking a series of questions to the employees at Flexipack.

A pilot interview was made to test the questions on a third party. Based on the pilot interview the duration of the interviews was estimated to be around 10 minutes. To ensure that the questions were good, since the questions are key to achieve a good result in qualitative studies [4]. Some of the questions were altered to acknowledge the ideas that were formed from the pilot interviews. Before the pilot interviews there was no demographic questions, so question 1 was added. Furthermore two questions were added, number 12 and 13, these questions focused on identification of issues with the management systems in place, while giving room for suggestions for improvement.

4.2 Questions

The creation of questions for the interviews at Flexipack were built upon the content in Chapters 2.5 and 3, the questions were structured to answer the research questions. The questions were based on previous studies of management systems, also some new questions were created to adapt the interview questions specifically for Flexipack. Some of the suggested questions from the pilot interviews were not included. However some additions and alterations to the final questions were done. For the full list of questions and translation to Swedish and Finnish [see Appendix 3]. To ensure that the translated questions asked were comparable to the English, a reverse translation was made where an external person translated the Finnish and Swedish questions back into English to ensure that the content of the questions remained unchanged. Several interpretation issues were identified and fixed at this stage.

4.3 Content Analysis

Content analysis is an, systematic way to analyze the content of recorded communication, either in spoken or written form, in this work referring to transcripts of the interviews [19].

The interviews were played back several times and the text transcribed. The transcriptions were read several times and the content of the transcripts were then arranged and categorized into content analytical units, which were analyzed. The analytical units were broken down into words and sentences that answered the categories given. The categories were then revised several times to ensure, that given reflections match what was asked in the research questions (see chapter 2.2). The quantitative aspect of this method was noticed by how frequently a topic had been mentioned, however. The importance of this work is not to quantify the results, but rather to investigate the potential for improvement. Hence, the frequency of the topic may not have as great impact as in a quantitative survey study. [19]

4.4 Research ethics

This subchapter describes how the research ethics were considered in interviews with the personnel at Flexipack. Firstly, the participants were informed about the interviews and the purpose of the study. Thereafter, they were asked for permission to interview and record the conversation, to enable transcribing at a later stage. The recordings were transferred from the recording device to a workstation, the data was also backed up to an external drive, stored separately from the workstation to ensure the data was not lost. Responsible conduct of research was followed according to [20].

The interviewees were promised confidentiality, and to ensure that the participants remain confidential a randomized character between A-Z was assigned to each interviewee, any comments and quotations presented in the results are represented by the given character.

5. The Flexipack case

This chapter compares management systems principals from international standards with the QMS and EMS implemented by Flexipack. To ensure normative management methods are used by Flexipack. Furthermore this chapter presents process of updating the list of legislations.

A breakdown of the international standards in Chapter. 3.1-3.3 provides a base for identification of problem areas with the management systems used by Flexipack. Identifying issues or flaws, presents the opportunity for further improvement.

5.1 Management system at Flexipack

This subchapter describes the management manual in use by Flexipack. This is done to identify issues within the management system at Flexipack in order to improve. In Chapter 6 the results from the employee interviews are analyzed and compared to statements in the management manual.

The management manual

The Management manual (Swe. Ledningsmanual) is the highest level of documentation used by Flexipack. This document describes the management- and control-system in use by Flexipack. This manual is used as a tool for continual improvement, and as the management's way to ensure standard requirements are met. Flexipack is ISO 9001:2008 and ISO 14001:2004 certified. The principles described in the manual are applied to all activities at Flexipack. The manual occasionally refers to other documentation such as the yearly revision plan [21] (Swe. Årsklockan) and list of legislation (Swe. Laglistan). [3]

Any major changes to the management system are presented to the personnel and announced on noticeboards, employees are informed through e-mail about minor changes. The management has responsibility for the management systems in use and the fulfillment of standard requirements both quality and environmental management as well as food safety goals. The CEO (Chief Executive Officer) oversees the management systems functionality as well as participates in the yearly revision of the management system. [3]

The quality and environmental mission statements are updated yearly and are presented to the personnel at meetings. The management meets 3-5 times per year to ensure effectivity of the management system, and to develop and improve it. [3]

Personnel training is arranged yearly according to the need and initiative of employees. The use of a yearly revision plan, a visualized schedule, where specific management topics are revised on a monthly basis. The yearly revision plan is handled by the Quality Manager who is responsible for the continuous follow-up of quality. The Quality Manager is responsible for the internal revisions, where activities are compared with the yearly plan, to ensure that progress is being made towards improvement of the processes at Flexipack. [3]

Customer focus is a central theme in the management manual. Flexipack strives to offer custom products, tailored to the needs of the customer. The customers are also considered to be important when it comes to the management systems in use, often customers require that audits or revisions be done, due to the fact that Flexipack is not yet BRC certified. However Flexipack is moving towards BRC certification [3]. BRC certification being a general goal, of the global food industry [8]. BRC is a private food safety standard, largely based on ISO 22 000 with some further requirements.

5.2 Updating Flexipacks list of legislation

This subchapter describes the updating process of the list of legislation provided by Flexipack. Changes in the legislation are presented in tables, all major changes concerning Flexipacks day to day operations have been included. Any minor revisions of laws or regulations that do not directly affect Flexipack or their operations are not included.§

Outdated legislation is described in Appendix 1 Replaced laws. The process of updating outdated legislation is relatively easy using the reference system in Finlex [22], given the list of legislation. When the number of a legislation or the name is searched for in Finlex the law is easily found. By clicking the Amendments to the act link (Fin. Viitetiedot) you are presented with all reference data concerning that specific law, this link takes you to the Finnish page of references.

If the law is out of date it will say replaced with (Fin. Kumottu säädöksellä) number/year and further link to references of that law. Returning to the original law text from the references page is done by clicking original act (Fin. Alkuperäinen säädös). Furthermore at the reference page there is commonly also access to the up to date act (Fin. Ajantasainen säädös). For further details of the legislation updates please see Replaced laws, in Appendix 1.

Changes in regulations can also be found under the references link (Fin. Viitetiedot), on the references page, changes (Fin. Muutokset) are presented in a list, where the number/year of the change is shown. In the description there is also the date of enforcement and what paragraph or chapter of the law has been altered. For details around the changes in legislation concerning Flexipacks operations, see Alterations in legislation, in Appendix 2.

6. Results

The results presented are collected through a study at Flexipack Oy, the results are structured in four categories: Experiences with ISO certification, Quality control, Reporting and Legislation and standard requirements. The categories were formed as a result of the content analysis of the study. The letters within brackets refer to the participants of the study. The questions asked the interviewees can be found in Appendix 3. Furthermore the updating of the legislation list and the description of how to interpret the tables can be found in Appendices 1-2

6.1 Experiences with ISO certification

The demographic data collected: How long have you been working for Flexipack? , (Question 1), has no effect on the results. The experience of the employees varied according to the tasks that they are assigned to, and not by the experience with Flexipacks management systems. The interviews show that, the personnel at Flexipack in most cases has been presented with the standards while employed at Flexipack. However, some employees were unaware of the existence or accessibility of these documents, others had previous experience with the

standards. Any previous experience with ISO standards is not assessed by (Question1).

ISO certification is not seen as only a customer requirement, but rather a way to systemize routines. "The certification is important for all stakeholders, it shows that we are a strong and reliable company on the market, and a company that the customer can rely on (K)."

The understanding, of how the ISO standards affect the day-to-day operations, were varying. The ISO standards are visible both as documentation and as practical measures such as clothing, hygiene and product requirements. Common answers to how the ISO standards impact employees work tasks were "through paperwork" (B, E) and "no idea" (A, D, R). While P and T answered: "ISO standards impacts the activities indirectly through goals and guidelines for quality."

The interviews show that the some activities require more knowledge in ISO standards than others. For those who the ISO requirements are present the benefits show, F and K said that: "ISO standards help to manage activities and gives clear guidelines to what needs to be done."

6.2 Quality control

Quality control and measurements play a central role for organizations within the food industry. Quality is present in every stage from the supply of raw material to the final product, customer requirements are an essential part of the business model at Flexipack.

Reclamations or customer feedback, is used in post-production to identify problems with the process. The quality measurements of produced plastic sheets are measured in the quality laboratory, at that time the plastic sheets have already been produced. "The thickness measurements should be made in production stage so that issues could be identified (S)." The customer also functions as an external reviewer or auditor, the feedback received from customers is used to correct errors and prevent future failures.

The yearly review plan (Swe. Årsklockan) is used as a guideline for management meetings and continuous improvement. The yearly review plan is underutilized,

it is seen as a tool for scheduling internal revisions. However the yearly revision plan is not implemented in an optimal way, scheduled reports or revisions cause occasional extra work. “The optimal would be if the revision process would be distributed over the whole year and the tasks it creates included in daily or weekly routines (V).”

6.3 Reporting

“The internal reporting system is largely based on communication, either through direct contact or the weekly meetings where personnel can affect how things are being done (T).” Communication and the consideration of employee opinions is highly regarded both from personnel and management.

“Many work tasks still require pen and paper, this can cause confusion and increases risks for misinterpretation if the data is transferred to digital a media (D)” there are steps where the work is being done twice. “Communication during shift changes, is especially important, through online reporting and documentation this could be improved (P)”. The reporting methods have improved since ISO 9001:2008 certification, “Flexipack is still in need of an ERP (Enterprise Resource Planning) system or an information processing system (T, D).”

6.4 Legislation and standard requirements

Requests were made to “improve the way standard requirements are presented and the availability of standards (P)”. Also the need of instructions for how quality control is implemented was recognized, especially in the case of temporary or substitute positions trough out production and quality control.

The management manual states that changes in authority requirements (acts and regulations) are revised at management meetings. “Legislation and regulation could be presented more clearly, the most difficult tasks are interpretation issues with legislation (P).” There is a need for laws to be presented in a simple way and be easily accessible. Regulation has been presented but it’s not done frequently enough (B).

“The implementation of BRC could also reduce the amount of work, there is extensive reports that could be replaced by external audits (P).” The latest standards are also not available even though steps have been taken to fulfill their requirements.

7. Discussion

This chapter presents the interpretations and reflections on the conducted study, the challenges and limitations of the work are discussed. The chapter also reflects upon the results, and suggestions for improvement are given on how Flexipack can use the results. Possibilities for further studies are also recognized, some suggestions are made to validate the importance of the study.

7.1 Challenges and Limitations of the study

Limitations of the study are important for further studies, they show, what could and should have been improved and or done differently. The demographic information gathered played very little role since, the duration of employment at Flexipack did not have as big impact in the study, as to what tasks the employee had. However, the employee position or tasks could not be presented since the confidentiality of the participant would be jeopardized. The personnel could perhaps have been interviewed as groups such as, management, administration, accounting and factory floor (production). It is uncertain if a study with focus groups would have improved the study.

The reliability and validity of given suggestions, are based largely on the comments and reflections of the interviewees as well as on the researcher's interpretation of the transcribed data. The results are presented in English, the translations from Finnish and Swedish back to English was done by the researcher. This might alter the meaning of some statements and quotation slightly.

Statistical descriptions could have been used if the study had included a survey where the participant would add a numerical rating on how important certain

things are, the relevance and weight of different topics could perhaps have been described in greater detail.

The updating of the list of legislation was challenging since there are few academic studies describing how this is done in an optimal way for SME's, an assumption would be that this is most commonly done by law firms or the companies themselves.

7.2 About the questions

Using interviews as a method to gather information has given reliable results, considering the answers given were, the opinions of employees. There was however clearly a separation between which questions gave results and which questions were less successful. Questions that opened for discussion were: How important is ISO certification and why? (Question 20) The other question worth mentioning as very successful was: Are there any unnecessary documentation steps? (Question 14) The later question received varying answers that often lead to answers questions related to issues or faults with documentation or activities at Flexipack.

Less successful questions where: Are regulation requirements clear? (Question 11) and what kind of management system was used before the certification in ISO 9001:2008 and ISO 14001:2004? (Question 16). Question 11 should be rephrased to emphasize how regulation requirements are presented at Flexipack. The question is unclear, what is meant by are the requirements clear? Internally within Flexipack or regulation set by governments? Question 16 was quite unnecessary since the certification was done so far back in time that any details where difficult to remember. Furthermore, Flexipack prior to ISO certification used a management system that followed principals from ISO 9000. This question could have been reserved for management only.

7.4 Suggestions for Improvement

A thorough assessment of what documentation is needed as the first step that need to be taken. This includes adding documents if this is needed, also the potential to merge documents can be assessed. On the topic of documents, the acquisition of the latest standards and standards that are intended to be implemented, would allow the personnel to familiarize themselves with the standards.

The realization of an internal information processing network is being done, it is important for Flexipack to evaluate what documents are transferred and to consider a gradual shift over to the new system, whereby the assessment of documents can be made during the transition phase.

The interviews reveal that there is a need for creation of clear instructions for situations where an employee temporary fills another employee's position. This is a simple thing to address by either creating or improving the instructions, if these already exist, then it has to be easy to access.

The use of the yearly review plan (Swe. Årsklockan) should be implemented better. The workflow should be streamlined and optimized so that the tasks required by the plan are brought down to at least weekly or bi-weekly levels. Some participants in the interviews stated that the yearly revision plan causes work that is rushed through. A way to address this issue would be to break down the work into smaller parts or introduce a follow up of routines, perhaps the documentation needed could be introduced in an electronic intranet for documents.

7.5 Suggestions for further studies

The possibilities for further studies based on this work are many, both at Flexipack and other organizations. A suggestion is to develop a tool for organizations, to receive automated updates, regarding Finlex data bank. Such a tool could be an application or service where organizations could subscribe to acts of their choice or other relevant data. The application could use the metadata from Finlex to identify changes to acts or regulations and notify the subscriber about the changes. The existence of such an application could significantly lower the

threshold for organizations to stay updated with current legislation. My opinion that, the main reason for organizations to have outdated lists of legislation is due to the complexity of doing this tedious task themselves. Therefore, they usually rush through the task or hire external professionals to do the work. The use of an automated information system to inform organizations about changes in legislation could save both time in management and ultimately save on expenses. This idea agrees with [11] where the authors also call for developed end user applications.

There are also academic studies that can be done to further develop the methods for improving management systems for SME's regarding normative and regulatory requirements. This work can be used as a model for how SME's, update or improve management systems. The description of how qualitative interviews are done, may be used for further studies. Especially Chapter 3 where the most important key elements of international standards are broken down and presented. The formulation of research questions and the realization of what interview questions did not give as good results as expected.

8. Conclusions

This thesis was set out to describe the management system of Flexipack and identify its weaknesses and issues. The qualitative research, carried out through the use of interviews, resulted in interesting material for the results. The interviews identify weaknesses and issues that can now be addressed. The study shows how a functioning management system can be critically assessed, through the use of interviews and qualitative content analysis, breaking down the answers to reveal weaknesses and issues. Using personnel interviews for the updating of a management system in accordance to ISO standards is a viable method, due to the fact, that the given opinions originate from actual personnel that have a day to day interaction with the management system.

At Flexipack ISO certification is seen as important for all stakeholders from customers to employees while functioning as a guide to good management. The need to improve the accessibility of documents, such as standards for the employees was also recognized. Some documents were seen as underutilized such as the yearly review plan, this document should be used to schedule tasks spread over the year, so that continuous follow up is possible. The use of on-line measurements in the production phase could reduce the number of faulty products.

The study offers Flexipack and other SME's opportunity to update and improve their management systems, the thesis can function as a guide for similar studies where interviews are used to assess if an update is needed. The thesis achieves its goal by, describing the key elements of international standards and reflecting on the management system at Flexipack by critical assessment and providing suggestions for improvement.

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Appendix 1

Replaced laws

Outdated Law	Number	Updated law	Number
Ympäristösuojelulaki	86/2000	Ympäristösuojelulaki	527/2014
Kemikaalilaki	744/1989	Kemikaalilaki	599/2013
Jätelaki	1072/1993	Jätelaki	646/2011
Jäteasetus	1390/1993		
Laki maa-alueilla tapahtuvien öljyvahinkojen torjumisesta.	378/1974	Öljyvahinkojen torjuntalaki	1673/2009
Ympäristönsuojeluasetus	169/2000	Valtioneuvoston asetus ympäristönsuojelusta	713/2014
Nestekaasuasetus	711/1993	Valtioneuvoston asetus nestekaasulaitosten turvallisuusvaatimuksista	858/2012
Valtioneuvoston asetus orgaanisten liuottimien käytöstä eräissä toiminnoissa ja laitoksissa aiheutuvien haihtuvien orgaanisten yhdisteiden päästöjen rajoittamisesta	435/2001	Valtioneuvoston asetus eräiden orgaanisia liuottimia käyttävien toimintojen ja laitosten ilmaan johdettavien päästöjen rajoittamisesta	64/2015
Asetus öljylämmityslaitteistoista	1211/1995	Valtioneuvoston asetus vaarallisten kemikaalien käsittelyn ja varastoinnin valvonnasta	685/2015
Asetus vaarallisten kemikaalien teollisesta käsittelystä ja varastoinnista	59/1999		
Ympäristöministeriön asetus yleisimpien jätteiden sekä ongelmajätteiden luettelosta	1129/2001	Valtioneuvoston asetus jätteistä	179/2012
Sosiaali- ja terveysministeriön asetus haitallisiksi tunnetuista pitoisuuksista	577/2009	Sosiaali- ja terveysministeriön asetus haitallisiksi tunnetuista pitoisuuksista	268/2014
Sosiaali- ja terveysministeriön asetus vaarallisten aineiden luettelosta	509/2005	Sosiaali- ja terveysministeriön asetus CLP-asetuksen liitteessä VI tarkoitetuista kemikaaleista	5/2010
Valtioneuvoston päätös pakkauksista ja pakkausjätteestä	962/1997	Valtioneuvoston asetus pakkauksista ja pakkausjätteistä	518/2014
Valtioneuvoston päätös keräyspaperin talteenotosta ja hyödyntämisestä	883/1998	Valtioneuvoston asetus keräyksestä ja kierrätyksestä	528/2014

Valtioneuvoston päätös ongelmajätteistä annettavista tiedoista sekä ongelmajätteiden pakkamisesta ja merkitsemisestä	659/1996	Valtioneuvoston asetus jätteistä	179/2012
Valtioneuvoston päätös öljyjätehuollosta	101/1997		
Valtioneuvoston päätös kaatopaikoista	861/1997	Valtioneuvoston asetus kaatopaikoista	331/2013
Valtioneuvoston päätös työssä käytettävien koneiden ja muiden työvälineiden hankinnasta, turvallisesta käytöstä ja tarkastamisesta	856/1998	Valtioneuvoston asetus työvälineiden turvallisesta käytöstä ja tarkastamisesta	403/2008
Valtioneuvoston päätös työpaikkojen turvamerkeistä ja niiden käytöstä	976/1994	Valtioneuvoston asetus työpaikkojen turvamerkeistä ja niiden vähimmäisvaatimuksia	687/2015
Vaasan kaupungin yleiset jätehuoltomääräykset	01/03/1998	Vaasan seudun jätehuoltomääräykset 01.05.2015	01/05/2015
Elintarvikkeiden kanssa kosketukseen joutuvista muovisista materiaaleista ja tarvikkeista	2002/72/EC	Elintarvikkeiden kanssa kosketukseen joutuvista muovisista materiaaleista ja tarvikkeista	EU No 10/2011

This table shows the outdated laws from Flexipacks list of legislation. To the left are the laws that have been replaced. To the right the laws replacing the outdated laws can be found. All information for the creation was gathered from Finlex [22].

Appendix 2

Alterations in legislation

Law	Number	Alteration	Significant changes
Ympäristösuojelulaki	527/2014		Replaces 86/2000
Jätelaki	646/2011		Replaces 1390/1993
Kemikaalilaki	599/2013		Replaces 744/1989
Öljyvahinkojen torjuntalaki	1673/2009		Replaces 744/1989
Elintarvikelaki	23/2006	643/2010	A producer of material that comes in contact with foodstuffs, has to register their operations to the food control authorities.
Laki naisten ja miesten välisestä tasa-arvosta	609/1986	1329/2014	Measures to promote gender equality in working life
Valtioneuvoston asetus ympäristönsuojelusta	713/2014		Replaces 169/2000 Major changes concerning detailed content of environmental permit application.
Valtioneuvoston asetus nestekaasulaitosten turvallisuusvaatimuksista	858/2012		Replaces 711/1993
Valtioneuvoston asetus vaarallisten kemikaalien käsittelyn ja varastoinnin valvonnasta	685/2015		Replaces 1211/1995 Replaces 89/1999 Replaces 855/2012
Valtioneuvoston asetus eräiden orgaanisia liuottimia käyttävien toimintojen ja laitosten ilmaan johdettavien päästöjen rajoittamisesta	64/2015		Replaces 425/2001
Valtioneuvoston asetus jätteistä	179/2012		Replaces 1129/2001
Sosiaali- ja terveysministeriön asetus haitallisiksi tunnetuista pitoisuuksista	268/2014		Replaces 1213/2002
Sosiaali- ja terveysministeriön asetus CLP-asetuksen liitteessä VI tarkoitetuista kemikaaleista	5/2010		Replaces 509/2005
Valtioneuvoston asetus pakkauksista ja pakkausjätteistä	518/2014		Replaces 962/1997

Valtioneuvoston asetus keräyksestä ja kierrätyksestä	528/2014		Replaces 883/1998
Valtioneuvoston asetus kaatopaikoista	331/2013		Replaces 861/1997
Valtioneuvoston asetus työvälineiden turvallisesta käytöstä ja tarkastamisesta	403/2008		Replaces 856/1998
Valtioneuvoston asetus työpaikkojen turvamerkeistä ja niiden vähimmäisvaatimuksia	687/2015		Replaces 986/1994
Commission Regulation on plastic materials and articles intended to come in contact with food	EC No 10/2011		Replaces 2002/72/EC

This table describes the changes that were noticed in the list of legislation, if the law has been replaced or if there are updates that affect Flexipack in some major way the changes are listed. In this table only significant changes are marked and a short description of the change is given. In Finlex referencing system they use number and year also for alterations, using the alteration number the changes made can be found [22]. Only changes from 2010 forward were considered since given the given information was updated to this point.

Questions for interviews at Flexipack.

1. How long have you been working for Flexipack?
2. Which ISO standards has been presented to you?
3. How do the ISO standards impact your work?
4. How do the requirements of various ISO standards show in your work?
5. How are the customer requirements met in the production phase?
6. Describe how the reclamation process works.
7. Describe how issues and problems are reported.
8. Regarding reported issues, how are you involved in the decision process?
9. When and where are regulations discussed?
10. Are regulations and standards accessible?
11. Are regulation requirements clear?
12. Which administrative stems are most difficult?
13. Are there any unnecessary documentation steps?
14. Is it important for you to be involved in the decision process at Flexipack and why?
15. Do you have any suggestions for improvement?
16. What kind of management system was used before the certification in ISO 9001:2008 and ISO 14001:2004
17. Why did Flexipack decide to implement ISO standards?
18. What changes were expected to occur due to implementation of the standards?
19. What kind of changes have you seen from the implementation of ISO standards?
20. How important is the ISO certification and why?
21. Describe how Flexipack meets the requirements of their customers.
22. How are legal or standard requirements present in the work process?
23. Are there sufficient tools for reporting issues or faults?
24. In what way are the employees involved in the decision process?
25. Have you considered BRC Food packaging manufacturing, and how would it benefit Flexipack?
26. Have you assessed the purpose of documents you use and why they are needed?

Interview questions translated to Finnish

1. Kauanko olette olleet töissä Flexipackillä?
2. Mitkä ISO standardit ovat teille esitelty?
3. Miten ISO standardit vaikuttavat teidän työhönne?
4. Miten ISO standardien eri vaatimukset näkyvät teidän työssänne?
5. Miten kohtaatte asiakkaiden vaatimukset tuotantovaiheessa?
6. Kuvaa miten reklamaatiota tehdään.
7. Miten ongelmien ja asioiden raportointi toimii.
8. Miten osallistutte päätöksiin, kysymyksien tai ongelmien syntyessä.
9. Missä ja milloin lainsäädäntöasiat tulevat ajankohtaisiksi?
10. Ovatko lainsäädännön sekä standardien vaatimukset saatavilla?
11. Ovatko lainsäädännön vaatimukset selviä?
12. Mitkä hallinnolliset tehtävät ovat vaikeimmat?
13. Onko teidän mielestänne tarpeettomia dokumentointi vaiheita?
14. Onko teille tärkeää että osallistutte Flexipackin päätöksentekoihin?
15. Onko teillä ehdotuksia parannukseen?
16. Minkälaista johtamisjärjestelmää käytitte ennen ISO 9001:2008 ja ISO 14001:2004 sertifiointia?
17. Miksi Flexipack päätti toteuttaa ISO standardeja?
18. Minkälaisia muutoksia odotettiin standardien toteuttamisen jälkeen?
19. Minkälaisia muutoksia olette nähneet standardien toteuttamisen jälkeen?
20. Miten tärkeää sertifiointi on teille ja miksi?
21. Kuvaa miten Flexipack kohtaa asiakasvaatimukset.
22. Miten standardien ja lainsäädännön vaatimukset näkyvät työtehtävissä?
23. Onko ongelmien ja kysymysten raportointijärjestelmä riittävän hyvä?
24. Miten työntekijät osallistuvat päätöksentekoon?
25. Oletteko harkinneet (BRC Food packaging manufacturing) sertifiointia, ja miten tämä hyödyttäisi teitä.
26. Oletteko arvioineet käyttämiänne dokumentteja ja niiden tarkoitusta?

Interview questions translated to Swedish

1. Hur länge har ni arbetat för Flexipack?
2. Har de olika ISO standarderna blivit presenterade för er?
3. Hur påverkar ISO standarderna ert arbete?
4. Hur framkommer ISO standardernas krav i ert arbete?
5. Hur möts kundkrav i produktions skede?
6. Beskriv hur reklamationsprocessen fungerar.
7. Beskriv hur frågor och problem rapporteras.
8. Hur deltar ni i beslutsfattandet angående fel rapportering eller frågor?
9. Var och när kommer lagstiftning fram i arbetet?
10. Är standarderna och lagstiftningen tillgängliga?
11. Är lagstiftningskraven tydliga?
12. Vilka administrativa arbetsskeden är svårast
13. Finns det onödiga dokumentations steg?
14. Är det viktigt för er att vara med i beslutsfattandet vid Flexipack?
15. Har ni några förslag på förbättringar?
16. Hurdant ledningssystem användes före ISO 9001:2008 och ISO 14001:2004 certifiering?
17. Varför bestämde sig Flexipack att implementera ISO standarder?
18. Vilka förändringar väntade ni er efter införandet av ISO standarderna?
19. Vilka förändringar har ni sett efter att ISO standarderna varit tillämpade?
20. Hur viktigt är det med ISO certifiering, och varför?
21. Beskriv hur Flexipack möter kundkrav.
22. Hur är lagstiftningen och standarderna synliga i arbetet?
23. Finns det tillräckligt bra rapporteringssystem för fel eller brister?
24. Hur involveras arbetarna i beslutsfattandet?
25. Har ni övervägt (BRC Food packaging manufacturing)certifiering, och hur skulle det vara till nytta för Flexipack?
26. Har ni utvärderat syftet med era dokument och varför de används?